

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claim 1 (Currently Amended): An isolated nucleic acid molecule for a salt-tolerant L-myo-inositol 1-phosphate synthase from *Porteresia coarctata* (PINO1) comprising the nucleic acid sequence of SEQ ID 1, a nucleic sequence encoding protein comprising SEQ ID 3, a nucleic acid sequence having at least 70% homology to SEQ ID 1 or a nucleic acid sequence having at least 70% homology to the nucleic acid sequence encoding the protein comprising the amino acid sequence of SEQ ID 3. ~~nucleotide sequences and the a deduced amino acid sequence as given below:~~

A. Nucleotide and deduced amino acid sequence of PINO1:

~~atg ttc atc gag age ttc cgc gtg gag age cgc cac gtg cgg tac ggc ggc ggc gag ate
M F I E S F R V E S P H V R Y G A A E I
gag teg gag tac cgg tac gac aet acg gag ctg gtg cac gag age cac gac ggc gee teg
E S W Y R Y D T T E L V H E S H D G A S
cgc tgg gtc gtc cgc ccc aag tcc gtc cag tac cac ttc agg acc age acc acc gtc ccc
R H V V R P K S V Q Y H F R T S T T V P
aag ctc ggg gtc atg ctc gtg ggg tgg ggc ggc aac aac ggc tea acg ctg acg get ggg
K L G V M L V G W G G N H G S T L T A G
gtc ate gcc age agg gag gga ate tea tgg ggc acc aag gac aag gtg cag caa gcc aac
V I A S R E G I S W A T K D K V Q Q A N
tac tat ggc tea ctc acc cag ggc tcc acc atc agg gta gga age tac aac ggg gag gag
Y Y G S L T Q A S T I R V G S Y N G E E
ate tac ggc cct ttc aag age ctc ctg ccc atg gtg aac cct gat gac ctt gtg ttc ggg
I Y A P F K S L L P M V N P D D L V F G
ggc tgg gac att age aac atg aac ctg get gat get atg acc agg gcc aag gtg ctg gac
G W D I S N M N L A D A M T R A K V L D
att gat ctg cag aag cag ctt agg cct tac atg gag tcc tgg tgc ctc tcc ctg gea tet
I D L Q K Q L R P Y M E S W C L A L A S~~

atg ate ceg act tea teg ceg eta ace agg gat eee geg ega aca atg tea tea agg gaa
M I P T S S P L T R D P A R T M S S R E
eea aga agg age aga tgg gge aga tea tea aag gac ate agg gag tte aag gaa aat aae
P R R S R W G R S S K D I R E F K E N N
aaa atg gac aag geg gtg gtg ttg tgg act gea aac act gaa agg tae aac aat tgt etg
K M D K A V V L N T A N T E R Y N N C L
tgt ttg gge tta atg ace aat gga aaa eet tet geg tet gtg gac agg aac eag geg gag
C L G L M T N G K P S A S V D R S Q A E
ata teg eea teg aca ttg tat tge cat tge ett get tea ttg gag ggt gte egt tea ata
I S P S T L Y C H C L A S L E G V R S I
aeg gga gee ett aaa aaa aaa tet tgg eet gga att gae gat ett gee att aaa aaa aaa
T G A L K K K S W P G I D D L A I K K K
etg eet gat ceg ggg gga tta att eaa aaa agg gge aaa eea aaa aaa aaa ace gge ttg
L P D P G G L I Q K R G K P K K K T G L
gtt gat tte ete atg ggt get gga ata aag eee ace tea att gte agt tae aac eae ttg
V D F L M G A G I K P T S I V S Y N H L
ggg aat aat gat gge aeg aae ett tet geg ceg eaa aca tte ega tee aag gag ate tee
G N N D G T N L S A P Q T F R S K E I S
aaa age age gtg gte gat gae atg gte tea age aat get ate ete tae gag eet gge gag
K S S V V D D M V S S N A I L Y E P G E
eat eet gat cat gtt gte gtg att aag tat gtg ceg tae gte gga gae age aag agg gee
H P D H V V V I K Y V O Y V G D S K R A
atg gat gag tae ace tea gag ate tte atg ggg ggt aag aae ace ate gtg etg eae aae
M D E Y T S E I F M G G K M T I V L H N
ace tge gag gae teg ete ett get gea eea ate att ett gae etg gtg ete etg gee gag
T C E D S L L A A P I I L D L V L L A E
ete age act agg att eag etg aaa gge gag gga gag gag aaa tte eat tee tte eat eea
L S T R I Q L K G E G E E K F H S F H P
gtg get ace ate etg age tae ete ace aag geg eee ett gtt eet eet gge aca eea gtg
V A T I L S Y L T K A P L V P P G T P V
gtg aae gee etg geg aag eag agg get atg ete gag aae ate atg agg gee tge gtt ggg
V N A L A K Q R A M L E N I M R A C V G

~~etg-gee-ect-gag-aac-aac-atg-ate-etg-gag-tac-aag~~
~~L-A-P-E-N-N-M-I-L-E-Y-K.~~

Claim 2 (Cancelled)

Claim 3 (Currently Amended): A process of obtaining cDNA, encoding a salt-tolerant L-myo-inositol 1-phosphate synthase comprising:

(i) isolation of a full-length cDNA for the L-myo-inositol 1-phosphate synthase gene from the leaf of *Porteresia coarctata* *Porteresia coarctata* by reverse transcription followed by polymerase chain reaction; and

(ii) sequenceing of the isolated L-myo-inositol 1-phosphate synthase gene, wherein the sequenced synthase from *Porteresia coarctata* (PINO1) is encoded by a nucleotide sequence (SEQ ID 1) and a deduced amino acid sequence (SEQ ID 3).

Claim 4 (Previously Presented): The process as claimed in claim 3, wherein the isolated full-length cDNA of PINO1 is cloned into a suitable bacterial expression vector pET 20B(+) to produce expression plasmids.

Claim 5 (Previously Presented): The process as claimed in claim 4, wherein said plasmids are introduced into the host strain *E. coli* BL-21 (DE 3) for obtaining an expressed PINO1 gene product.

Claim 6 (Previously Presented): The process as claimed in claim 5, wherein the expressed PINO1 proteins are solubilized in a solubilization buffer containing 8M Urea, 0.5 M NaCl, 20 mM Tris-HCl, pH 7.5, 10 mM ME and 2 mM PMSF.

Claim 7 (New): A plasmid comprising the isolated nucleic acid molecule of claim 1.

Claim 8 (New): A bacteria comprising the isolated nucleic acid molecule of claim 1.